



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,153	08/19/2005	Hiroynki Sakamoto	27604-00003US1	2814
30678 7590 07/02/2009 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20006				
EXAMINER				
TAL, XIYUNU				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
07/02/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/528,153

Applicant(s)

SAKAMOTO ET AL.

Examiner

Xiuyu Tai

Art Unit

1795

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,12-15 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,12-15 and 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/13/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 3-9, 12-15, and 19-21 have been considered but are moot in view of the new ground(s) of rejection necessitated by applicant's amendment. Newly added claims 22 and 23 are acknowledged.

3. In response to the arguments that a coating composition is not suitable for an adhesive composition, Kadokura indicated that the electrodepositable adhesive resin of the present invention is ionized at least in the solvent in the electrodeposition paint and such resin may be appropriately selected from the resins used for the electrodeposition paints (col. 6, line 29-35), which may be cationic electrodeposition paints (col. 6, line 44-52). Therefore, utilizing the cationic resin electrodeposition coating composition of Kawakami as an adhesive composition of Kadokura in electrodeposition process is within ordinary skill in the art.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3-9, 12-15, and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadokura (U.S. 5,676,812) in view of Kawakami et al (U.S. 6,106,684) and in further view of Nakayama (U.S. 5,928,730).

8. Regarding claim 1, Kadokura discloses an electroconductive adhesive member and a method of make the same. The adhesive member 1 is attached to the inner surface of an outer cover 11 by forming adhesive resin layer 4 on a thin metallic film layer 3 (copper film, i.e. conductive material) by electrodeposition coating (Figure 1; col. 3, line 35-43; example 1-1, col. 9, line 48-67). The adhesive resin layer 4 is bonded to the adherent member by curing by heating (col. 7, line 46-48; col. 10, line 1-5).

Kadokura fails to teach the adhesive composition comprising a hydratable function group and unsaturated bond containing cationic resin composition. However, Kawakami et al disclose a cationic electrodeposition coating process and composition. Kawakami teaches a water-based cationic electrodeposition coating composition (col. 3, line 31-32). The cationic electrodeposition coating composition of Kawakami contains a component having a hydratable function group, such as sulfonium (col. 5, line 11-17). Kawakami indicates that the ionic group in the hydratable function group is capable of ion releasing upon voltage application (col. 5, line 12-15) and can be irreversibly rendered non-conductive due to the electrolytic reduction reaction (col. 5, line 19-21). Kawakami further teaches that when the cationic electrodeposition coating composition contains a component having an unsaturated bond, a further improved throwing power can be obtained (col. 5, line 60-63). Therefore, it would be obvious for one having ordinary skill in the art to utilize the cationic electrodepositon coating composition comprising a hydratable function group and an unsaturated bond as suggested by Kawakami in lieu of the electrodeposition composition of Kadokura in order to enhance coating quality and efficiency while using the coating method of Kadokura. Moreover,

Kawakami teaches a water-based coating composition (col. 3, line 31-32); hence no volatile material would be produced when the coating product was subjected to heating process

Kadokura/Kawakami does not teach a step of drying being carried out between electrodeposition and curing step wherein the drying step is carried out without curing the film. However, Nakayama discloses a process for coating the paint. Nakayama teaches to remove solvent by drying or forced drying after the coating process, before curing the paint film in order to achieve smooth final paint film (col. 9, line 60-65). Therefore, it would be obvious for one having ordinary skill in the art to include a step of drying excessive solvent after electrophoretic deposition, but before the curing step as suggested by Nakayama in order to achieve smooth film using the method of Kadokura/Kawakami.

9. Regarding claim 3, the cationic coating composition of Kawakami is used in electrodeposition coating process, including a step of applying voltage to activate electrochemical reaction (col. 3, line 28-30), reads on the instant claims.
10. Regarding claims 4 and 19, the hydratable function group of Kawakami is sulfonium (col. 5, line 11-17), reads on the instant claims
11. Regarding claims 5, 20, and 22, the unsaturated bond of Kawakami may be a triple-bond containing compound such as propargyl alcohol (col. 7, line 10-15), reads on the instant claims.
12. Regarding claims 6 and 7, the amount of sulfonium of Kawakami is in the range of 10-300 mmol/100g of the resin solid (col. 5, line 44-45) and the content of

unsaturated bond is preferably 50-2000 mmol/100g of the resin solids (col. 6, line 10-12), which are within the claimed ranges.

13. Regarding claim 8, the cationic coating composition of Kawakami contains polyepoxide resin skeleton (col. 6, line 23-29), reads on the instant claim.

14. Regarding claim 9, the polyepoxide of Kawakami includes novolak phenol type polyepoxy resins and/or cresol type polyepoxy resins (col. 6, line 30, 32-33) and the average molecular weight of resin is in the range of 250- 20,000, more preferably 500-500 (col. 6, line 36-38), reads on the instant claim.

15. Regarding claim 12, Kadokura also teaches eletroconductive adhesive resin layers 4 are formed on both sides of a metallic substrate 5 (Figure 2; col. 3, line 46-48) wherein the adhesive resin layers 4 are the adhered surface, reads on the instant claim.

16. Regarding claim 13, Kadokura also teaches eletroconductive adhesive resin layers 4 are formed on both sides of a metallic substrate 5 (Figure 2; col. 3, line 46-48) wherein the metallic substrate 5 is the adhesion target and the adhesive resin layers 4 are the adhered surface, reads on the instant claim.

17. Regarding claim 14, the thin metallic film layer 3 of Kadokura is a thin copper film (col. 3, line 39-40), reads on the instant claim.

18. Regarding claim 15, it is a product (laminate)-by-process (the method of claim1) claim. Because of the nature of product-by-process claims the Examiner cannot ordinarily focus on the precise difference between the claimed product and the disclosed product. It is then Applicants' burden to prove that an unobvious difference exists. See *In re Marosi*, 218 USPQ 289,292-293 (CAFC 1983). Furthermore, it is noted

that this claim contains product-by-process language. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

19. Regarding claim 21, the composition to make the adhesive resin layer using the method of Kadokura/Kawakami/Nakayama comprises a base resin (col. 6, line 24-25 of Kawakami), a component having a hydratable functional group (col. 5, line 15-17 of Kawakami), and a component having a unsaturated bond (col. 5, line 65-67 of Kawakami). The resulting resin layer has sufficient film potential (i.e. electric resistance; col. 3, line 64-67), reads on the instant claim.

20. Regarding claim 23, although Kadokura/Kawakami/Nakayama does not specify the drying temperature, the curing temperature of the composition of cationic electrodeposition coating is at 100-200C (col. 10, line 42-45 of Kawakami) and the bath temperature of the cationic electrodeposition coating is at 10-45C (col. 10, line 4-6 of Kawakami). Therefore, one having ordinary skill in the art would have realized to set the drying temperature between 10-100C when drying the excessive solvent using the method of Kadokura/Kawakami/Nakayama.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuyu Tai whose telephone number is 571-270-1855. The examiner can normally be reached on Monday - Friday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/X. T./
Examiner, Art Unit 1795

6/25/2009.

/Alexa D. Neckel/
Supervisory Patent Examiner, Art Unit 1795